

COMPLETE LISTING OF THE CLAIMS

The following lists all of the claims that are or were in the above-identified patent application. The status identifiers respectively provided in parentheses following the claim numbers indicate the current statuses of the claims.

Claims 1-10 (Canceled)

11. (Currently Amended) The A rapid diagnostic test system of claim 10, further comprising

a medium containing a labeling substance that comprises a persistent fluorescent structure, the labeling substance being capable of binding the persistent fluorescent structure to a target analyte when a sample containing the target analyte is applied to the medium;

a light source positioned to illuminate a target area on the medium;

a photodetector positioned to measure light from the target area of the medium,

wherein the photodetector and the medium are contained in a single-use module; and

a reusable module having a receptacle into which the single-use module can be inserted for communication of test signals between the single-use module and the reusable module.

12. (Original) The system of claim 11, wherein the reusable module implements a user interface capable of indicating a test result.

Claims 13-20 (Canceled)

21. (Previously Presented) The system of claim 12, wherein the user interface comprises a display for the test result.

22. (Previously Presented) The system of claim 11, wherein the test signals are electrical test signals.

23. (Currently Amended) The system of ~~claim 10~~ claim 11, wherein the persistent fluorescent structure comprises a quantum dot.

24. (Currently Amended) The system of ~~claim 10~~ claim 11, wherein the light that

the photodetector measures has a frequency characteristic of fluorescent light resulting from the light source illuminating the persistent fluorescent structure.

25. (Previously Presented) The system of claim 24, wherein the persistent fluorescent structure comprises a quantum dot.

26. (Currently Amended) The system of claim 24, wherein the medium comprises a lateral-flow strip for performing a binding assay, and the ~~test~~ target area contains an immobilized substance that binds to and holds a complex including the labeling substance and the target analyte.

Claims 27-29 (Canceled)

30. (Currently Amended) The system of ~~claim 10~~ claim 11, wherein the labeling substance comprises:

a first type of quantum dot that emits light having ~~the~~ a first frequency; and
a second type of quantum dot that emits light having ~~the~~ a second frequency.

31. (Currently Amended) The system of claim 30, wherein:
the first type of quantum dot in the labeling substance is attached to a substance that binds to the target analyte and to the ~~test~~ target area; and
the second type of quantum dot is attached to a substance that binds to a control area of the medium.

32. (Previously Presented) A rapid diagnostic test system comprising:
a single-use module including: a medium containing a labeling substance capable of binding a persistent fluorescent structure to a target analyte; and a photodetector positioned to measure light from a test area of the medium; and
a reusable module including: a receptacle into which the single-use module can be inserted for communication of electrical test signals between the single-use module and the reusable module; and a user interface that provides test results according to the electrical test signals from the single-use module.

33. (Previously Presented) The system of claim 32, wherein the single-use module further comprises a light source positioned to illuminate the test area of the medium.

34. (Previously Presented) The system of claim 32, wherein the persistent fluorescent structure comprises a quantum dot.

35. (Previously Presented) The system of claim 32, wherein the labeling substance comprises:

- a first type of quantum dot that emits light having the first frequency; and
- a second type of quantum dot that emits light having the second frequency.

36. (Previously Presented) The system of claim 35, wherein:

the first type of quantum dot in the labeling substance is attached to a substance that binds to the target analyte and to the test area; and

the second type of quantum dot is attached to a substance that binds to a control area of the medium.